



## SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1966

A NON-PROFIT AMATEUR TECHNICAL ORGANIZATION DEDICATED  
TO THE ADVANCEMENT OF COMMUNICATIONS ABOVE 1000 MC.

### W6IFE Newsletter

President: **Doug Millar, K6JEY** 2791 Cedar Ave Long Beach, CA 90806 562-424-3737  
doughhelen@moonlink.net

Vice President: **Dick Bremer, WB6DNX** 1664 Holly St. Brea, CA 92621 714-529-2800 rabremer@juno.com

Recording Sec: **Mel Swanberg, WA6JBD** 231 E Alessandro Blvd Riverside, CA 92508 909-369-6515  
swanberg@pe.net

Corresponding Sec: **Kurt Geitner, K6RRA** 213 Main St. #5 Seal Beach, CA 90740 310-718-4910  
k6rra@gte.net

Treasurer: **Dick Kolbly, K6HIJ** 26335 Community Barstow, CA 92311 760-253-2477  
rkolbly@compuserve.com

Editor: **Bill Burns, WA6QYR** 247 Rebel Rd Ridgecrest, CA 93555 760-375-8566 bburns@ridgecrest.ca.us

Webmaster Chip Angle, N6CA

ARRL Interface Frank Kelly, WB6CWN 1111 Rancho Conejo Blvd. #501 Newbury Park, CA 91320  
805-499-8047 fk@event1.com

FCC Interface Dave Laag, K6OW 11614 Indian St. Moreno Valley, CA 92557 909-924-1517

W6IFE License Trustee Ed Munn, W6OYJ 6255 Radcliffe Dr. San Diego, CA 92122 619-453-4563  
edmunnn@compuserve.com

The **1 March 2001** meeting of the SBMS will have Kerry, N6IZW talk about Noise Figure and construction of a source from Qualcomm parts. Pictures and other information appeared in previous editions of the W6IFE Newsletter. Kerry will have some equipment to measure your source at different frequencies. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at <http://www.ham-radio.com/sbms/>.

April Elections- This March meeting will have the formal nominations for officers of the 2001-2002 SBMS year. Thus far Doug Millar, K6JEY and Dick Bremer, WA6DNX have been nominated for the office of President. The current list of officers can be seen in the above banner. April will be the time of the election.

Last meeting- Kerry presented a super briefing on the creation of a 1296 transverter using Qualcomm parts. Everyone took lots of surplus items home to build with thanks to Kerry's generosity and luck at scrounging.

Kerry had a second generation of transverter that is only a third the size of the first with similar performance. Ed, W6OYJ had a presentation on the newer, smaller synthesizer used in the smaller transverter and how to program the synthesizer, which is now on the San Diego website (see links from the SBMS pages and data later in this newsletter). 21 people present.

The Annual SBMS dinner had 23 people in attendance; Bill, WA6QYR with his wife and daughter; Dick, K6HIJ and his wife; Chuck, WA6EXV and his wife; Dave, WB6OVZ; Doug, K6JEY; Kurt, K6RRA; Carl AD6QL; George K6GMV and his wife; Glenn KE6HPZ; Larry, K6HLH; Jeff, KN6VR and his wife; Bob, W6SYA and his wife; Ken, WB6DTA and his wife; and Chris, N9RIN and friend Leanna. The food was good and in large servings with reasonable prices. Doug and Kurt had arranged some door prizes that were selected by the attendees. I think everyone received at least one item. Then came the white elephant drawings for those who carried in such a mysterious box or bag of things. Lots of neat stuff moved from one garage to another that Saturday night. Everyone had a good time talking with everyone else. Super event. Thanks to Doug and Kurt for their work.

### Scheduling

5 April Program is TBD. Election of Officers.

3 May Program TBD.

7 June Program TBD.

Microwave Update 2001 in Sunnyvale September 27 through 30 by The 50 MHz and Up Group of Northern California- President Doug is wanting to know who is interested in booking at a lower rate hotel say about 30 minutes away from the main event.

### Wants and Gots for sale

Want- Plug-in for HP5245L type counter with direct 200 MHz input, Jeff KN6VR 714-577-0045.

For Sale- new 18 inch Direct TV dish with mount \$20, new LNB for dish single out put \$5 Dick WB6DNX 714-529-2800.

New 76 GHz record set--This is a preliminary notice, details to follow. Today, Feb. 1, at 12.20 local, Will. W0EOM/6 worked Bob, KF6KVG/6 on 76 GHz. Bob was near Loma Prieta Mountain, at the QTH of Dave, W6NL, grid sq CM97BC. Will was on Mt. Vaca, grid CM88WJ, accompanied by Gary, AD6FP. mid - grid to mid-grid distance is 145 km. weather was calm, mild, and hazy. margins were 1 to two S units with fades. Bob had a 12 in dish with 1 mw. Will had an 18 in dish, 5 mw. power. 73, Will

Hello Microwavers, A new modification article was added today to the SBMS Web Pages. It covers the Rectangular 3 5/8 by 8 1/2 inch Qualcomm Synthesizer Board with a 3036, 3216, or 3236 Synthesizer IC, and with VCO RF output in the 2.1-2.7 GHz range. You can access the article in the section on Technical Papers contributed by the San Diego Microwave Group at: <http://www.ham-radio.com/sbms/sd/>. Then follow the links through "Technical Articles & Projects", "Qualcomm Hardware Modification Articles", and "Qualcomm Hardware Modifications & Photos". The article and photos are under the heading "3036/3216 Synthesizer Board". This article with drawings and close-up photos was presented at the February 1, 2001 meeting of the SBMS in Corona, California. AND FROM a later note-- I have restructured the San Diego technical pages of the SBMS web site, to make it easier to find articles/photos on specific topics. Also added some new articles and links to related hardware mods and microwave technical items. My earlier arrangement was getting too hard to maintain and add new items. Check it out. 73s from Ed Munn, W6OYJ (858) 453-4563 [edmunnn@compuserve.com](mailto:edmunnn@compuserve.com)

Hello everyone -I'm in the process of seriously looking for a low to medium power argon-ion laser for hobby experimentation in my garage. I'm wondering if anyone on the list, being in such close contact with surplus

electronics sales around the country, either has any (working) argon lasers they are looking to sell, or knows where I could find one. Online dealers are asking outrageous prices (thousands) for heavily used OEM equipment that I am confident is available almost free to the right people!

What I'm basically looking for is something in the 100 mW range that is preferably air-cooled and comes with a matching power supply for 110 VAC. Examples of such lasers would be the ALC 60X or Omnichrome 532 commonly found in older Xerox machines (or so I am told!), but anything by Lexel, Cyonics, Coherent, or Spectra Physics would be fantastic. I am familiar with the care and feeding as well as hazards of operating these types of lasers and the safety precautions that must be taken to avoid personal injury! Jeff Keyzer UCSD EE Grad Student [jkeyzer@ucsd.edu](mailto:jkeyzer@ucsd.edu).



The Annual SBMS Dinner had lots of good food and discussion. 23 people attended the dinner this year.

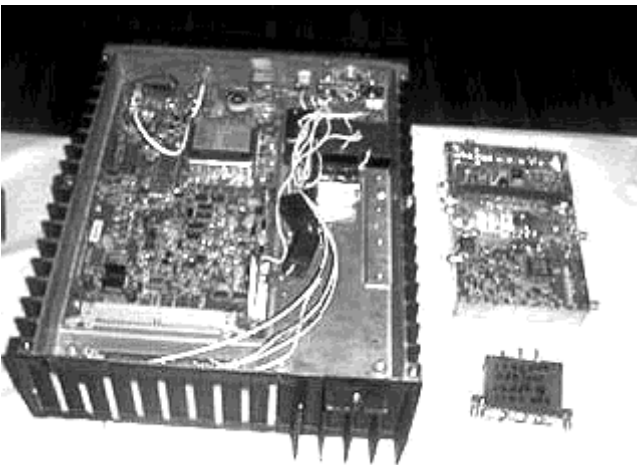


SBMS President Doug, K6JEY standing on the left kept the dinner and prize operations on track during the 2001 SBMS Annual dinner at the Home Style Restaurant in Guasti, CA on the 10 February event.

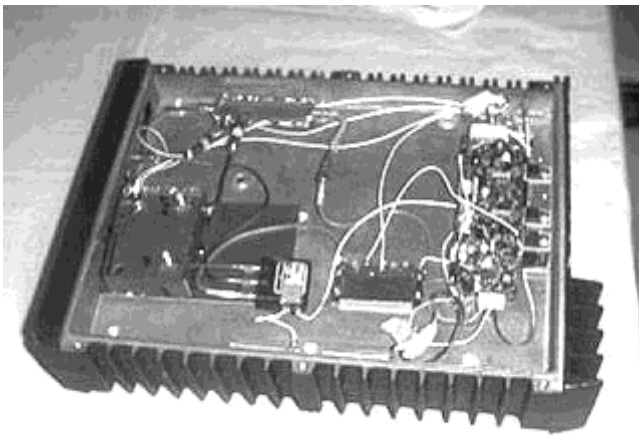


To the left are Sally and Ken Halford (WB6DTA) and to the right are Bob and Alice Gardner (W6SYA) during the SBMS dinner. All had a good time thanks to President Doug (K6JEY) and Kurt (K6RRA) planning and arranging for the fun.

San Bernardino Microwave Society is a technical amateur radio club affiliated with the ARRL having a membership of over 90 amateurs from Hawaii and Alaska to the east coast. Dues are \$15 per year which includes a badge and monthly newsletter. Your mail label indicates your call followed by when your dues are due. Dues can be sent to the treasurer as listed under the banner on the front page. If you have material you would like in the newsletter please send it to Bill WA6QYR at 247 Rebel Road Ridgecrest, CA 93555, [bburns@ridgecrest.ca.us](mailto:bburns@ridgecrest.ca.us), or phone 760-375-8566. The newsletter is generated about the 15th of the month and put into the mail at least the week prior to the meeting. This is your newsletter. SBMS Newsletter material can be copied as long as SBMS is identified as source.



The original 1296 MHz transverter that Kerry built is shown to the left. This is the synthesizer side with mixer and 1296 filter and power supplies. To the right is the new version with smaller synthesizer and other smaller assemblies. The lower right is a version of 1296 filters used to keep the LO out of the transmit RF.



This is a view of the "RF" side of the 1296 MHz transverter with the TX/Rx preamp, LNA, power amp and power supply.

This rig used an older Qualcomm transmitter switching power supply to produce the voltages needed by the amplifiers.

San Bernardino Microwave Society newsletter

247 Rebel Road

Ridgecrest, CA

93555

USA

73's Bill